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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,726

04/15/2004

Peter Hansen

1100-078

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47670

7590

10/16/2008

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EXAMINER

MERCHANT, SHAHID R

ART UNIT

PAPER NUMBER

3692

MAIL DATE

DELIVERY MODE

10/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/825,726	<b>Applicant(s)</b> HANSEN ET AL.	
	<b>Examiner</b> SHAHID R. MERCHANT	<b>Art Unit</b> 3692	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of the Claims***

1. This action is in response to the amendment filed on August 14, 2008.
  - Claims 1-24 are pending.
  - Claims 1-17 have been cancelled.
  - Claims 18, 19 and 21 have been amended.
  - Claim 24 is new.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 18-24 have been considered but are moot in view of the new ground(s) of rejection.
3. Examiner notes paragraph 32 below of Buckwalter teaching that the Order Protection System 500 can be operated by the same entity that operates the Trading System 200. Therefore, one skilled in the art would realize that an order submitted by a customer 102a to a broker would be "intercepted" by the Order Protection System because the Order Protection System 500 and the Trading System 200 can be operated together by the same entity as shown below.

[0032] Order protection system 500 may be any computing device which is capable of performing the various functions described herein. For example, in some embodiments, order protection system 500 may be configured as a Web server adapted to exchange information with operators 106, trading system(s) 200, and sources of market data 112. In some embodiments, order protection system 500 is a back office system operated by (or on behalf of) the same entity which operates trading system(s) 200, allowing the entity to amass, monitor, and evaluate options order execution data for trade requests received from its customers. In some embodiments, order protection system 500 is operated by (or on behalf of) one entity while trading system(s) 200 are operated by (or on behalf of) other entities. For example, a service provider may operate order protection system 500 as a fee-based service, allowing a number of different brokers to interact with the system and to utilize features of the order protection system.

Further Examiner notes paragraph 53 as taught by Buckwalter.

[0053] Quality database 600 (as depicted) includes entries identifying a number of pieces of information regarding customer orders which were received by trading system 200. This quality data may be generated on a substantially real-time basis throughout the trading day to ensure that brokers and their customers are aware of the general quality of trading and to allow brokers to take corrective action on behalf of their customers. In some embodiments, the type of data stored in quality database may be varied

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based on customer-specified rules. In some embodiments, the type of data stored in quality database is generally fixed by the entity operating order protection system 500.

4. Examiner notes that Buckwalter teaches receiving (intercepting) a customer order from a trader intended for said broker in paragraphs 20 and 37.

[0020] In general, and for the purposes of introducing concepts of embodiments of the present invention, option trade activity is monitored and evaluated pursuant to embodiments of the present invention as follows. A customer submits an option order to a broker, requesting execution of the option order. A trading system, upon receipt of the order, timestamps the order and captures the terms of the order (e.g., including information identifying the customer, the requested product, price, quantity, and any restrictions associated with the order). At the time of receiving the order, a snapshot of the market is captured to identify the NBBO at the time of the order. The NBBO at the time of the order is, in some embodiments, an NBBO that is synthesized from BBO data from each exchange. In some embodiments, this information is stored at a database accessible to a customer order protection system server or other device operated to store, monitor and analyze customer orders.

[0037] Process 200 begins at 202 where a customer order is received. In some embodiments, this customer order is received from trading system 200 after it has been submitted to trading system 200 by a customer. The customer order may include details specifying the terms on which the customer wishes the order to be completed. For example, a typical option order will include information specifying the customer submitting the order, the product to be traded (e.g., a put or a call of a particular security underlying having a particular expiration and strike price), the quantity of contracts to be traded and any restrictions on the order (e.g., good for the day, etc.). Some orders include information specifying a price (e.g., such as a limit order), while others specify that the trade be performed at the market price. In some embodiments, the information specifying the customer will include a customer name, account number, and branch identifier (if any). In some embodiments, an order identifier or sequence number is assigned to the customer order to uniquely identify the order. In some embodiments, the customer order is time stamped when it is received by trading system 200.

Further, Buckwalter teaches intercepting one or more market order executions from said broker intended for said trader and matching one of said stored market order identities in paragraph 22 and 42-43 and storing an identity of said one or more market orders.

[0022] Quality data or information is then generated by comparing the market data at the time the order was received and the market data at the time of execution to identify any discrepancies or information affecting execution quality. In some embodiments, if it appears that the customer did not receive best execution on the order, corrective steps may be taken to provide the customer with best execution. In some embodiments, a number of execution quality and analysis reports may be generated based on the stored information, allowing the broker and the broker's customers to monitor and summarize order activity and quality.

[0042] Processing continues at 208 where execution time NBBO data is captured. For example, this NBBO information may be retrieved from market data source 112 such as the OPRA data feed. As used herein, this NBBO data associated with a particular product at the time of execution of a customer order involving the product will be referred to as "execution NBBO data" (and may be synthesized from BBO data from each of the exchanges). The execution NBBO data associated with the product traded is captured and stored or otherwise associated with the order information, the order NBBO data, and the execution data. For example, this information may be stored at, or otherwise accessible to, order protection system 500. In some embodiments, execution NBBO data may also include data relating to market conditions or exchange-specific information such as whether the markets at the time of execution were fast, whether the execution was a book order, auto eligible, late, or the like. Market size at the time may also be provided.

[0043] Processing may continue at 210 where quality data is generated regarding the customer order. Quality data may be generated, for example, by comparing various data stored and associated with each customer order. For example, the order NBBO and the execution NBBO associated with a particular order may be compared to determine if the customer received best execution. A comparison may result in flagging certain customer orders to identify anomalous trades or trades requiring further scrutiny. An order which executed outside of both the order NBBO and the execution NBBO may be flagged. An order which executed outside of the order NBBO but within the execution NBBO may be flagged if the difference between the order and execution times is less than

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one minute (or some other specified time). An order which executed within the order NBBO, but outside of the execution NBBO may be flagged for further scrutiny (e.g., to ascertain whether the execution report was late or improperly time stamped). An order which otherwise has some discrepancy between the order NBBO and the exchange NBBO (and/or other exchange quotes) may also be flagged. This information may, for example, be stored in (or accessible to) quality database 600 associated with order protection system 500.

Buckwalter teaches receiving real-time market data relative to one of said market order executions as an indication of said broker performance. Paragraphs 42 and 31 as cited above shows that Buckwalter teaches receiving real-time market data relative to one of said market order execution.

[0042] Processing continues at 208 where execution time NBBO data is captured. For example, this NBBO information may be retrieved from market data source 112 such as the OPRA data feed. As used herein, this NBBO data associated with a particular product at the time of execution of a customer order involving the product will be referred to as "execution NBBO data" (and may be synthesized from BBO data from each of the exchanges). The execution NBBO data associated with the product traded is captured and stored or otherwise associated with the order information, the order NBBO data, and the execution data. For example, this information may be stored at, or otherwise accessible to, order protection system 500. In some embodiments, execution NBBO data may also include data relating to market conditions or exchange-specific information such as whether the markets at the time of execution were fast, whether the execution was a book order, auto eligible, late, or the like. Market size at the time may also be provided.

[0031] Market data 112 may be any of a number of different types of options market data received from a variety of data sources and which can be used to facilitate option transactions. For example, in the U.S., intra-day option pricing data is provided by the Option Price Reporting Authority (OPRA). In some embodiments, market data 112 includes a feed of OPRA data. In some embodiments, this OPRA data feed is received by order protection system 500 and/or trading system(s) 200 substantially in real-time. This OPRA data feed provides option pricing from each of the options exchanges in the U.S. Those skilled in the art will recognize that other types of market data sources may also be used to assist in the processing and routing of transactions as described herein. For example, daily or monthly transaction volume information may be retrieved from the OCC or other sources and used to support routing decisions. As another example, daily pricing data may be retrieved from different specialists or traders. Market data 112 may be received by order protection system 500 and/or trading system(s) 200 on a regular basis or substantially in real-time.

Next, Buckwalter teaches calculating one or more execution qualities in real-time as an indication of said broker performance. Buckwalter teaches the concept of comparing the NBBO at time of order vs. the NBBO at time of execution. The comparison might identify an anomalous trade requiring further scrutiny. One skilled in the art would recognize this comparison as being a calculated execution quality. The difference in NBBO pricing can be calculated by subtracting the two values.

[0043] Processing may continue at 210 where quality data is generated regarding the customer order. Quality data may be generated, for example, by comparing various data stored and associated with each customer order. For example, the order NBBO and the execution NBBO associated with a particular order may be compared to determine if the customer received best execution. A comparison may result in flagging certain customer orders to identify anomalous trades or trades requiring further scrutiny. An order which executed outside of both the order NBBO and the execution NBBO may be flagged. An order which executed outside of the order NBBO but within the execution NBBO may be flagged if the difference between the order and execution times is less than one minute (or some other specified time). An order which executed within the order NBBO, but outside of the execution NBBO may be flagged for further scrutiny (e.g., to ascertain whether the execution report was late or improperly time stamped). An order which

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otherwise has some discrepancy between the order NBBO and the exchange NBBO (and/or other exchange quotes) may also be flagged. This information may, for example, be stored in (or accessible to) quality database 600 associated with order protection system 500.

Next, Buckwalter teaches conveying said one or more execution qualities to said trader. Buckwalter teaches in paragraph 22 and 53, that the quality data can be monitored and summarized by the broker and the brokers customer (trader).

[0022] Quality data or information is then generated by comparing the market data at the time the order was received and the market data at the time of execution to identify any discrepancies or information affecting execution quality. In some embodiments, if it appears that the customer did not receive best execution on the order, corrective steps may be taken to provide the customer with best execution. In some embodiments, a number of execution quality and analysis reports may be generated based on the stored information, allowing the broker and the broker's customers to monitor and summarize order activity and quality.

[0053] Quality database 600 (as depicted) includes entries identifying a number of pieces of information regarding customer orders which were received by trading system 200. This quality data may be generated on a substantially real-time basis throughout the trading day to ensure that brokers and their customers are aware of the general quality of trading and to allow brokers to take corrective action on behalf of their customers. In some embodiments, the type of data stored in quality database may be varied based on customer-specified rules. In some embodiments, the type of data stored in quality database is generally fixed by the entity operating order protection system 500.

5. Applicant's arguments with respect to claim 20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

6. Claim 18 objected to because of the following informalities: the term broker performance should be changed to broker's performance. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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8. Claims 18-20 and 24 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 1 recites the limitation "said broker" in lines 4, 6 and 12. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 18-19 and 21-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Buckwalter et al., U.S. Patent Application Publication 2003/0177085 (see PTO-892, Ref. C) in view of Parker et al., U.S. Patent Application Publication 2004/0059628 (see PTO-892, Ref. D).

12. As per claim 18, Buckwalter teaches a computer implemented method providing indications of market trade quality, comprising:

intercepting one or more market order communications from a trader intended for said broker (see paragraph 37);

storing an identity of said one or more market orders (see paragraphs 37, 49-51);

intercepting one or more market order executions from said broker intended for said trader and matching one of said stored market order identities (see paragraph 39);

receiving real-time market data relative to one of said market order executions (see paragraph 39);

calculating one or more execution qualities in real-time as an indication of said broker performance (see paragraphs 41-43);

conveying said one or more execution qualities to said trader (see Figure 5A).

Buckwalter does not explicitly teach without knowledge of said broker, accepting from said trader an opinion of said one or more execution qualities and recording said opinion.

Official Notice is taken that it is old and well known companies to provide services to a client without the knowledge of other entities through non-disclosure agreements (see PTO-892, Ref. U). The motivation to use a non-disclosure agreement is, so confidential or proprietary information is not disclosed to a competitor or other party not entitled to the information.

Parker teaches accepting from said trader an opinion of said one or more execution qualities and recording said opinion (see paragraphs 4-7, 15, 22-25 and Figure 2).

Therefore, it would be prima facie obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Buckwalter and Parker to have a trader rate the execution qualities of a broker because it would allow a trader to



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determine whether the broker represents value for money based on execution qualities and ratings as taught by Parker (see paragraph 2).

13. As per claim 19, Buckwalter and Parker teach the method of claim 18 as described above. Buckwalter further teaches wherein the conveyance of said one or more execution qualities is as a result of departure of a value from predetermined limits (see paragraph 43).

14. Claim 21 recites similar limitations to claim 18 and thus rejected using the same art and rationale in the rejection of claim 18 as set forth above.

15. As per claim 22, Buckwalter and Parker teach the system of claim 21 as described above. Buckwalter further teaches wherein said market trade communications comprise: market trade order communications (see paragraphs 37-43).

16. As per claim 23, Buckwalter and Parker the system of claim 21 as described above. Buckwalter further teaches wherein said market trade communications comprise: market trade execution communications (see paragraphs 37-43).

17. As per claim 24, Buckwalter and Parker the method of claim 18 as described above. Parker teaches ranking said broker based on said execution quality; and conveying said ranking to said trader (see paragraphs 22-25 and Figure 4).

Therefore, it would be prima facie obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Buckwalter and Parker to rank brokers based on execution quality; and conveying the ranking to the trader because it would allow a trader to determine whether the broker represents value for money based on execution qualities and ratings as taught by Parker (see paragraph 2).

18. Claim 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Buckwalter et al., U.S. Patent Application Publication 2003/0177085 (see PTO-892, Ref. C) in view of Parker et al., U.S. Patent Application Publication 2004/0059628 (see PTO-892, Ref. D) as applied to claim 18 above, and further in view of Quality of Execution, LLC (see PTO-892, Ref. V). Hereinafter QOE.

19. As per claim 20, Buckwalter and Parker teach the method of claim 18 as described above. QOE teaches wherein said execution quality is conveyed to a trader via a display (see page 1 and 8-34).

Therefore, it would be prima facie obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Buckwalter, Parker and QOE to convey execution quality data to a trader via a display because it would allow a trader to determine whether the broker represents value for money based on execution qualities and ratings as taught by Parker (see paragraph 2).

### ***Conclusion***

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHAHID R. MERCHANT whose telephone number is (571)270-1360. The examiner can normally be reached on First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz P. Abdi can be reached on 571-272-6702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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